

CLAIMS

What is claimed is:

1. A network controller system, comprising:
a plurality of network ports; and
a driver system that operates the plurality of network ports;
the driver system determining which of said network ports can be
combined together to form a team.
2. The system of claim 1 wherein the network ports include a first network port and a second network port and all of the network ports couple to at least one network device, and wherein the driver system causes the first network port to transmit a packet to the second network port and the second network port to transmit a packet to the first network port to determine if the first and second network ports are coupled to the same network.
3. The system of claim 1 wherein each of said network ports transmit packets to all of said other network ports to determine which of said network ports are coupled to the same network.
4. The system of claim 1 wherein said driver system includes discovery logic that causes at least one pair of network ports to transmit test packets between each member of the pair and said discovery logic determines whether each test packet is received by one port in said pair of network ports.
5. The system of claim 4 wherein said discovery logic determines that both members of said pair of network ports can be teamed together if both of said test packets are received by the ports.
6. The system of claim 4 wherein said discovery logic causes each of said network ports to transmit a test packet to all networks and determines which of test packets are received.

7. The system of claim 6 wherein, based on determining which of said test packets are received, said discovery logic determines which of said network ports can be teamed together.
8. The system of claim 6 wherein said discovery logic determines that at least one team can be formed from said network ports.
9. The system of claim 6 wherein said discovery logic determines that at least two teams can be formed from said network ports.
10. The system of claim 6 wherein said discovery logic determines a status associated with a pair of network ports resulting from transmission of a pair of test packets between the network ports in the pair, said status comprising a status selected from the group consisting of no connectivity, one-way connectivity, partial connectivity and full connectivity.
11. The system of claim 1 wherein the driver system determines that two or more network ports can be combined together to form a team if said two or more network ports have common layer 2 connectivity.
12. The system of claim 11 wherein a plurality of said network ports are combined to form a team and said driver system determines whether all of said networks in said team continue to be eligible to remain in said team.
13. The system of claim 12 wherein said driver system includes validation logic that causes all of said network ports in said team to transmit test packets to all other network ports in said team to determine if all of said network ports in said team have the same layer 2 connectivity.
14. A computer system adapted to couple to one or more network devices, comprising:
 - a processor;

a plurality of network interface controllers (NICs) coupled to said processor; and
a controller subsystem that operates the plurality of NICs, the controller subsystem determining which of said NICs are combinable as a team, the team is assigned a network address to be used by external logic.

15. The system of claim 14 wherein the NICs include a first NIC and a second NIC and all of the NICs couple to at least one NIC, and wherein the controller subsystem causes the first and second NICs to trade test packets to determine if the first and second NICs are coupled to a common network.

16. The system of claim 14 wherein said controller subsystem causes at least one pair of NICs to transmit test packets between each member of the pair and determines whether each test packet is received by one NIC in said pair of NICs.

17. The system of claim 16 wherein said controller subsystem causes each of said NICs to transmit a test packet to all networks to which the computer system couples and determines which of test packets are received, and the test packets that are received determine which of said NICs can be combined together as a team.

18. The system of claim 14 further including an output device coupled to the processor and wherein a graphical representation showing which NICs can be combined together as a team is shown on the output device.

19. The system of claim 14 wherein a plurality of said NICs are combined as a team and said controller subsystem determines whether all of said NICs in said team continue to be eligible to remain in said team.

20. The system of claim 19 wherein said controller subsystem causes all of said NICs in said team to transmit test packets to all other NICs in said team to determine if all of said NICs in said team have the same layer 2 connectivity.
21. A network controller system, comprising:
a plurality of network ports; and
a means for determining which of said network ports can be combined together to form a team.
22. The system of claim 21 wherein the network ports include a first network port and a second network port and all of the network ports couple to at least one network device, and said means includes means for causing the first network port to transmit a packet to the second network port and the second network port to transmit a packet to the first network port and for determining if the first and second network ports are coupled to the same network.
23. A computer system, comprising:
a processor;
a plurality of ports coupled to said processor, said ports adapted to connect to a network, the network to which one port connects being the same or different as the network to which another port connects, at least two of said ports are operated as a team; and
logic coupled to said ports, said logic determines whether said ports in said team continue to be eligible to be operated in said team.
24. The computer system of claim 23 wherein eligibility is determined based on transmitting test packets between pairs of ports in said team.
25. The computer system of claim 23 wherein said logic determines which of said ports may be operated as a team.

26. The computer system of claim 23 wherein said logic causes all of said ports not currently operated as part of a team to transmit test packets to all other ports to determine whether said non-teamed ports can be operated in a team.

27. The computer system of claim 23 further including a display coupled to the processor on which information regarding which ports in said team can remain in the team and which cannot remain in the team.

28. A method usable in a system comprising a plurality of ports operated as team having a single address to external devices, said method comprising:

transmitting packets from each port in said team to all other ports in said team;

determining whether said packets are received;

determining which of said ports may continue to be operated in said team and which of said ports, if any, are ineligible to be operated in said team; and

providing information that indicates which ports are eligible to be operated in said team and which ports, if any, are ineligible to be operated in said team.

29. The method of claim 28 wherein determining which of said ports may continue to be operated in said team and which of said ports, if any, are ineligible to be operated in said team includes determining that a pair of ports may continue to be operated in said team if packets were received by both ports in said pair from the other of said pair's ports.